DOCUMENT RESUME

ED 220 907 EA 014 751

AUTHOR	Bliss, Sam W.
TITLE	Zero-Base Budgeting: A Management Tool for School Districts.
INSTITUTION	Association of School Business Officials of the United States and Canada, Park Ridge, IL. Research Corp.
REPORT NO	ISBN-0-910170-04-5
PUB DATE	78
NOTE	50p.
AVAILABLE FROM	Publications Department, Research Corporation of the Association of School Business Officials of the United States and Canada, 720 Garden Street, Park Ridge, IL 60068 (Order No. 2804; $7.50).
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	*Budgeting; *Educational Administration; Elementary Secondary Education; Program Descriptions; Program Implementation; Records (Forms); Resource Allocation; *School Administration
IDENTIFIERS	Ranking; *Zero Base Budgeting

ABSTRACT

To help school managers make more efficient use of educational resources, this handbook discusses and describes zero-base budgeting (ZBB). After a brief introductory chapter, the author explores the nature and characteristics of ZBB, gives a little of its historical background, notes its relationship to planning and to educational accountability, and lists ZBB's five basic steps: (1) identifying "decision units" (defined as any programs that consume resources), (2) analyzing "decision packages" (documents that describe a decision's objectives, activities, resources, and costs), (3) ranking decision packages, (4) allocating funds, and (5) preparing official budgets. Chapter 3 covers the development of decision packages, including the packages' relationship to decision units, their contents, and the making of alternative packages. Sample decision package forms are provided. Chapter 4 discusses ranking the decision packages, suggests methods and procedures for ranking, and presents sample ranking forms. The final chapter outlines the implementation of ZBB, development of an implementation manual, the role of implementation teams and district administrations, and the importance of policy decisions, budget formats, communication, and personnel development in implementing ZBB. (RW)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

Zero-Base Budgeting

A Management Tool for School Districts

ED220907

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

- [x] This document has been reproduced as received from the person or organization originating it.
- [ ] Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

Charles Stolberg

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Association of School Business Officials

EA 014 751

1978 ASBO BOARD OF DIRECTORS

President:
DR. FERDY J. TAGLE, JR., R.S.B.A.
Assistant Superintendent
Public Schools of Brookline
333 Washington Street
Brookline, Massachusetts 02146

President-Elect:
MR. KENT J. ABEL, R.S.B.A.
Assistant Superintendent
Alpine School District
50 North Center
American Fork, Utah 84003

Vice President:
MR. ED L. WEST, R.S.B.A.
Superintendent
North East Independent School District
10333 Broadway Drive
San Antonio, Texas 78286

Directors:
MR. DAVID ALLEN, R.S.B.A.
Asst. Supt. for Business Affairs
Wilmette Board of Education
615 Locust Road
Wilmette, Illinois 60091

MR. PAUL R. LEARY
Asst. Supt. for Business
Norwood City School District
2132 Williams Avenue
Cincinnati, Ohio 45212

MR. RICHARD J. McINTOSH, R.S.B.A.
Superintendent of Business
Bd. of Education for Borough of East York
840 Coxwell Avenue
Toronto, Ontario, Canada M4C 2V3

DR. ARNOLD E. BEKEMEYER, R.S.B.O.
Business Manager
Affton School District
8701 Mackenzie
Affton, Missouri 63123

DR. RONALD J. HOWDYSHELL
Assistant Superintendent
Florence City Schools
541 Riverview Drive
Florence, Alabama 35630

MR. FRED WESSENDORF, R.S.B.A.
Director of Business Affairs
Cedar Falls Community Schools
903 Washington Street
Cedar Falls, Iowa 50613

Immediate Past President
MR. LINFORD F. MOYER, R.S.B.A.
Assistant Superintendent, Business
Pottstown School District
Beech and Penn Streets
Pottstown, Pennsylvania 19464

DR. JAMES L. SLATER
Executive Director
ASBO Headquarters Building
2424 West Lawrence Avenue
Chicago, IL 60625
Telephone: (312) 728-3204

THE ASSOCIATION OF SCHOOL BUSINESS OFFICIALS OF THE UNITED STATES AND CANADA is an international professional educational organization, incorporated not for profit, and is the oldest and largest education organization in North America devoted exclusively to the improvement of school business management. Its main objectives are to encourage the wise expenditure of taxpayers' monies, and to improve efficiency in the practice of school business management.

Zero-Base Budgeting

A Management Tool for School Districts

by
Dr. Sam W. Bliss
Director, Research & Development Center,
and Professor of Education,
Northern Arizona University, Flagstaff

Published by the Research Corporation of the
Association of School Business Officials

720 Garden Street
Park Ridge, IL 60068
(312) 823-9320

4

COPYRIGHT 1978 BY THE
RESEARCH CORPORATION
OF THE
ASSOCIATION OF SCHOOL BUSINESS OFFICIALS

An educational research organization
incorporated not for profit

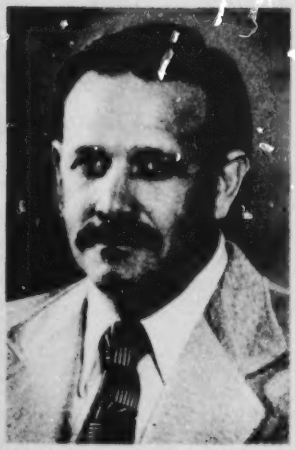
All Rights Reserved Under International
and Pan American Copyright Conventions

International Standard Book No.: 0-910170-04-5

Printed in U.S.A.

To order additional copies of "Zero-Base Budgeting,"

write: Publications Dept.,
Research Corp. of the
Association of School Business
Officials of the United States
and Canada, 720 Garden Street,
Park Ridge. Illinois 60068



ACKNOWLEDGEMENTS

My initial interest in educational management was created when I became the Comptroller and Treasurer for the Decatur Public Schools in 1962. Since that beginning I have pursued the improvement of educational management as the Director of the Midwestern States Educational Information Project, consultant and author for the Research Corporation's Educational Resources Management System, and Director of the Research and Development Center at Northern Arizona University.

I am particularly indebted to Dr. William H. Curtis for encouraging and helping me to write this monograph. Appreciation is expressed to the Research Corporation of the Association of School Business Officials for financing the writing and publishing of this monograph. A special note of thanks is extended to Dr. Charles W. Foster, the retiring Executive Secretary and to Dr. James W. Slater, the Executive Director, Association of School Business Officials of the United States and Canada.

Also, I wish to give credit to my wife, Margaret, for typing and editing the manuscript.

Sam W. Bliss

PREFACE

This monograph was developed because of the interest and concerns expressed by persons associated with the management of resources in the public schools of the United States and Canada. One concern is for the most effective and efficient use of resources in educational institutions. A second concern is for the conservation of time and money in the development of management tools, which tends to become very costly. A third concern is for coordination in the development of management tools in order that unnecessary duplication can be avoided and that systems might be established which are reasonably compatible. A fourth and important concern is the potential usefulness of zero-base budgeting in an educational environment. A fifth and final concern is to provide a description of the state-of-the-art which might serve to guide further development of zero-base budgeting in educational organizations.

In this monograph an effort has been made to provide the understandings needed for bridging the differences between business and educational use of zero-base budgeting. These understandings are essential if zero-base budgeting is to be adapted successfully to an educational environment. The contents of this writing are based upon the assumption that before educational administrators will use this management tool, they must have a full understanding of zero-base budgeting and its consequences.

This monograph is a step forward on the continuum for the improvement of management in education. It represents a pioneering effort to clarify zero-base budgeting and to assist persons to discover its relevance for educational institutions. Much more needs to be done by people who are competent to discuss zero-base budgeting and who have technical, practical, and theoretical knowledge of the field of management in education.

S.W.B.

Table of

Contents

		Page
Acknowledgements		i
Preface		iv
CHAPTER 2	INTRODUCTION	1
CHAPTER 2	THE NATURE AND CHARACTERISTICS OF ZERO-BASE BUDGETING	5
	Historical Background	5
	The Nature of Zero-Base Budgeting	6
	The Characteristics of Zero-Based Budgeting	7
	Zero-Base Budgeting and the Planning Process	8
	Accountability and Zero-Base Budgeting	9
CHAPTER 3	THE DECISION PACKAGE	11
	The Decision Package Concept	11
	Determination of Decision Units	12
	Factors That Determine Decision Package Development	12
	Decision Package Identification	13
	Decision Package Form	14
	Decision Package Content	14
	Descriptive Information	14
	Purpose	15
	Program Methodology	15
	Expected Outcomes as Measures of Effectiveness	16
	Decision Package Alternatives	17
CHAPTER 4	THE RANKING OF DECISION PACKAGES	23
	The Ranking Process	23
	Who in the Organization Should Rank Decision Packages	24
	Ranking Methods and Procedures	24
	The Summary Ranking Form	27
CHAPTER 5	THE IMPLEMENTATION OF ZERO-BASE BUDGETING	33
	Developing Implementation Procedures and Documents	34
	The Team Approach	34
	The Implementation Manual	35
	Administration and Communication	35
	Administration Policy Decisions	36
	Governance of Education	37
	Communication	38
	Personnel Development	38
Bibliography		40

Chapter 1

Introduction

1

Many signs indicate that school districts are becoming much more difficult to manage. Some of these signs are declining enrollments, increasing complexity of composition, collective bargaining, public concern over rising costs, parent and student disenchantment with the lack of relevancy of some educational programs, and a recognition by school administrators of the increasing uncertainty in the planning and decision-making process. If this trend continues, which seems likely, management of school districts is not going to improve without improved management skills and tools.

However, improved management does not necessarily mean less expenditure, either in the management process or in the functions which management seeks to control. Improved and better management should strive to obtain a more acceptable ratio between resource use and effectiveness or benefit. Thus, the question school administrators face today is: How can we best use the resources available to bring about a more desirable ratio between cost and effectiveness or benefit?

Management tools can be very simple and also quite complex. They can be used manually or they can be utilized in conjunction with third generation computers. The wise school administrator when considering the implementation of a management tool for his organization, will identify and examine fully the benefits to be received in relationship to the cost of its development and installation. Continual consideration must be given to the investment and operational costs of introducing a new and different management tool in the institution. There must exist a practical and reasonable cost relationship between "price" of the tool and its benefits to the school district.

Improved educational planning and decisions depend largely upon better identification and analysis of potential programs and the information related to them. Zero-base budgeting does provide for

the display of the organization's programs through the development of decision packages. Also, information contained in a decision package can be quite useful in the planning and decision process.

The introduction of a new management tool such as zero-base budgeting requires a large amount of communication between the developers of the tool and the tool's users. Considerable effort must be expended to assist users to understand the tool's terminology, technical concepts, and operational procedures. Zero-base budgeting places heavy emphasis upon analysis which will require school administrators to become more knowledgeable about the analytical process. Therefore, training programs specifically designed to assist the users to more fully understand the tool and to reduce the communication gap between the developers and the users must be given high priority before and during the implementation of the tool.

Comprehensive management systems/tools for the public schools had their beginning in the late 1960's and early 1970's. The Educational Resources Management System (ERMS) developed by the Research Corporation, Association of School Business Officials is one excellent example. ERMS was an adaptation of the Planning Programming Budgeting System used by business and government to the elementary and secondary schools. The application of zero-base budgeting by industry and government cannot be made directly to local educational agencies. The output or products of the public schools as well as the complex interrelationships of educational programs requires that specific modifications occur in zero-base budgeting prior to its implementation in an educational setting.

Currently there is widespread interest in zero-base budgeting among school business administrators. This interest is due partly to the search for better management tools. Added stimulus is being provided by the fact that zero-base budgeting is being installed in the federal government. President Carter on February 14, 1977 issued a memorandum for the Heads of Executive Departments and Agencies in which he requested them to implement zero-base budgeting in their divisions. Key parts of the memorandum are given below:

"During the campaign, I pledged that immediately after the inauguration I would issue an order establishing zero-base budgeting throughout the Federal Government. This pledge was made because of the success of the zero-base budget system adopted by the State of Georgia under my direction as Governor.

A zero-base budgeting system permits a detailed analysis and justification of budget requests by an evaluation of the importance of each operation performed.

An effective zero-base budgeting system will benefit the Federal Government in several ways. it will:

Focus the budget process on a comprehensive analysis of objectives and needs.

Combine planning and budgeting into a single process.

Cause managers to evaluate in detail the cost-effectiveness of their operation.

Expand management participation in planning and budgeting at all levels of the Federal Government.

I ask each of you to develop a zero-base system within your agency in accordance with instructions to be issued by the Office of Management and Budget. The Fiscal Year 1979 budget will be prepared using this system.

By working together under a zero-base budgeting system, we can reduce costs and make the Federal Government more efficient and effective. . ." 3

At the October, 1977 annual meeting of the Association of School Business Officials, further emphasis was provided for zero-base budgeting in a resolution. Resolution Number 11 reads as follows:

The Association of School Business Officials believes that zero-base budgeting is an effective and rather easily understood management tool for planning and controlling the expenditure of funds. It is a concept that those who are responsible for providing funds for education also can understand and respect. Zero-base budgeting provides the school business official with a sound basis for explaining and substantiating budget requests. The Association believes that it is a tool that should be considered by all school systems in planning annual budgets.

The installation of zero-base budgeting in local school districts has begun in a few school districts. The Memphis Public School District is perhaps the largest school system currently implementing zero-base budgeting. Whether or not the present interest will lead to widespread use of zero-base budgeting in local educational agencies remains a question that can only be answered with the passage of time. Zero-base budgeting encompasses processes and concepts that are potentially useful for school districts. However, the realization of the benefits of zero-base budgeting depends heavily upon good human relationships and adequate communication as well as its technology.

This monograph discusses and describes zero-base budgeting in the following major sections:

Chapter II The Nature and Characteristics of Zero-Base Budgeting
Chapter III The Decision Package
Chapter IV The Ranking of Decision Packages
Chapter V The Implementation of Zero-Base Budgeting

As of the date of this monograph the implementation of zero-base budgeting has occurred almost entirely in industry and government.

Will zero-base budgeting become a useful management tool for school districts? Will zero-based budgeting replace existing educational management systems? Does zero-base budgeting offer to school executives a better approach to the planning and decision making process so vital in managing educational institutions? Is it an effective way to control school expenditures so as to receive the greatest return on limited resources?

The above questions and others can only be answered by the leadership of the nation's schools. Because of the nature and structure of zero-base budgeting the school business official cannot ignore its potential for usage in educational organizations. School business officials in their key leadership role of budgeting and expenditure control of school districts should, at the very minimum, acquire a good basic understanding of zero-base budgeting. This monograph was written to be helpful to school administrators as they seek to become more knowledgeable about zero-base budgeting. The installation of zero-base budgeting remains a decision of the local school administration.

Chapter 2

The Nature and Characteristics of Zero-Base Budgeting

Historical Background

5

Zero-based budgeting was first developed and introduced in business by Peter A. Pyhrr. (32, p. 111) in 1969. Pyhrr was the Manager, Staff Control, at Texas Instruments, Inc., Dallas, Texas. From this beginning zero-base budgeting spread to many other businesses. Also, some State Governments and the Federal Government are utilizing zero-base budgeting. Pyhrr (34, p. 5) estimated that some 100 companies were using zero-base budgeting. The first state government to use zero-base budgeting was Georgia in 1973 under the administration of Governor Carter (33, p. 1). Senator Muskie introduced The Government Economy and Spending Reform Act of 1976 (S. 2925) in Congress, which required a congressional zero-base review and evaluation of every governmental authorization for program and activities every five years. This Act (S. 2925) also required the Director of the Office of Management and Budget to develop a program for zero-base budgeting in all departments and agencies of the Executive Branch (33, p. 1).

One of the first school districts to install the concepts of zero-base budgeting was the Greece Central School District, Greece, New York. In 1975-76 the Greece Central School District began the implementation of zero-base budgeting under the acronym of "SCAT" — The School Cost Analysis Team (6, p. 55).

A few other school districts are now beginning the use of zero-base budgeting. The Memphis Public Schools are well into the installation of zero-base budgeting. As of the date of this monograph widespread use of zero-base budgeting has not happened in educational agencies. Yet, there is an ever increasing usage of zero-base budgeting by industry, public utilities and governmental agencies. Thus, it seems reasonable to expect greater utilization of zero-base budgeting by educational institutions.

The Nature of Zero-Base Budgeting

Pyhrr has defined zero-base budgeting as a management tool that companies can use to improve planning, budgeting, and operational decision making (34, p. 5). The primary concept of zero-base budgeting is that all managers will reassess their programs from the foundation up and provide justification for all resources requested for the attainment of the organization's goals. This concept implies that major changes may occur in program and also in the allocation of resources to the desired programs from one budget period to the next budget period.

The zero-base budgeting process is applicable to all programs and
6 cost centers of an organization. A program or cost center is subject to zero-base budgeting when there exists a cost effective relationship. Cost effectiveness is basically an analysis of the program's objectives in terms of the resource cost required to achieve the program's stated objectives. The resource cost of a program and its alternatives are expressed in dollars. The program's measures of effectiveness are stated in quantitative and/or qualitative terms. Cost effectiveness analysis is accomplished by dividing the program's effectiveness measures by its dollar costs. The result is an index that indicates the ratio of program costs to program effectiveness. When cost effectiveness indexes are obtained for each program alternative, decision-makers will have been provided with the opportunity to identify the program alternative that offers the least cost for the desired effectiveness.

Cost effectiveness analysis is a useful process for assisting administrators to analyze decision packages and their alternatives. Also, the results of cost effectiveness analysis (cost index — ratio of cost to effectiveness) may be used to assist in the ranking of decision packages in a priority order with all other decision packages in the organization's divisions.

In school districts zero-base budgeting can be applied to administrative, instructional and support functions at all levels and including state and federally funded projects. Thus, zero-base budgeting can lead to the reassessment of programs and cost effectiveness analysis between programs in order to obtain the most desired relationship of objective achievement and the use of the district's resources.

In industry, when an activity cannot be justified in terms of its objectives and costs, it is usually terminated. In education, the termination of programs is not always possible because of local policy, state or federal law. For these kinds of programs the planners and decision-makers might use zero-base budgeting to obtain a higher degree of objective achievement with a more reasonable use of resources.

Zero-base budgeting seems to imply that all programs should be assessed and their costs justified each year. Although some educational programs may be analyzed yearly, other programs may be subjected to review over longer periods of time. New programs may

be analyzed each year for several years in a row. Other programs that are required year after year can be assessed every other year or every third or fifth year. Also, educational programs with objectives that cannot be achieved in a single year should be reviewed for the time period specified by the objectives. Zero-base budgeting does require that all existing programs be periodically monitored and evaluated in relationship to their contributions to the district's goals, just as any proposed new program.

The Characteristics of Zero-Based Budgeting

The zero-base budgeting is performed by engaging in the following basic steps: 7

1. **Determination and Identification of An Organization's Decision Units.** A decision unit is any program that consumes resources. Another way of describing a decision unit is that it is a cost center or budget unit. A decision is described in a document called a decision package. The most finite component prepared for analysis in zero-base budgeting is the decision package. Briefly, each decision package must contain, at the minimum, objectives, activities, resources and costs. Decision units and decision packages will be discussed in greater detail in Chapter 3.

2. **Analysis of Each Decision Package.** This process allows the manager of the decision package to reassess and justify its operation. Several basic questions are routinely asked and answered during the analytical process.
   - Does the decision package support and contribute to the goals of the district?
   - What would be the result to the district if the decision package was eliminated?
   - Can the decision package's objectives be accomplished more effectively and/or efficiently? This question requires creative planning by the person(s) developing the decision package.

3. **Ranking of Decision Packages.** A ranking procedure is used to establish a rank priority of decision packages within an organizational level. Ranking is a way of evaluating all decision packages in relationship to each other. Since there are any number of ways to rank decision packages, organizations will no doubt employ various methods of ranking. The main point is that the ranking of decision packages is an important process of zero-base budgeting.

4. **Acceptance and Allocation of Funds.** Administrators, after a review and analysis of all decision packages, will accept and determine the amount of funding for each decision package. In a school district this process will probably be done by the Superintendent and the executive cabinet with final review, analysis, and approval by the Board of Education.

5. **Budget Preparation.** After step four is accomplished, the official district budget document is prepared. This final step leads to Board

of Education approval and other required actions as determined by state school law.

Zero-Base Budgeting and the Planning Process

A major planning effort is required by personnel of an organization when installing zero-base budgeting. The planning process provides the basic guidelines and direction needed for the development and ranking of decision packages. Through the planning process administration can prepare for the uncertainty of the future. Because education is a continuous long-term activity, educational planning should encompass not only the next fiscal year but it should also include several years into the future. Long-range planning enables educators to consider the potential consequences of current decisions over an extended period of time.

The planning process provides the mechanism through which administration identifies and establishes the kind of educational program needed by the people in the community the institution was created to serve. The local, state, regional, and national educational needs of the school district's public are considered in the planning process. The common components of the planning process in education are:

Educational Philosophy or Mission Statement
Generation of Broad Policies
Needs Assessment
Preparation of General Goals and Objectives
Establishment of Priorities
Resource Indentification
Program Analysis and Selection

During the planning process planners will establish priorities for the needs, goals, and programs of the school district. This level of planning encompasses the whole educational system. The result of this comprehensive planning is the creation of the basic "framework" or "foundation" upon which all learning and support service activities are developed for the educational organization. The planning process utilizes the tools of research and analysis, as well as the creative thinking of the planners.

Educational organizations, currently in operation, have at some time in the past, gone through a planning process. A new or beginning educational organization will start with the planning process in order to create the foundation for its operation. Zero-base budgeting, which requires the development and ranking of decision packages periodically, re-creates a planning process on all levels of the organization. Administrators preparing decision packages will assess and analyze the relationship of their packages to the district's philosophy, needs, and broad goals. Also, included in the analytical process will be discussions regarding decision package alternatives, recommendations, and resource requirements. The ranking of decision packages establishes the rank order of importance that each

package has in relationship to all other decision packages in the organization. Adherence to the concepts and procedures of zero-base budgeting will result in the following:

1. **Retention of desirable decision packages (including modification as may be necessary and/or desirable).**
2. **Elimination of obsolete, non-relevant decision packages.**
3. **Increased or decreased levels of funding for some decision packages**
4. **Addition of new decision packages.**

The zero-base budgeting planning process eliminates one of the major disadvantages of most traditional budgeting systems. In the traditional budgeting system planners concentrate on the cost increase from one year to the next year. Singleton (37, p. 20) has stated that zero-base budgeting overcomes this traditional budgeting weakness by subjecting all proposed activities and expenditures to the type of scrutiny normally conducted only for proposed new programs. This type of comprehensive resource cost analysis, conducted for all decision packages, is a strong internal planning characteristic of zero-base budgeting.

Accountability and Zero-Base Budgeting

The term accountability is well known to educational administrators. It has a strong relationship with the following:

1. **What do you wish to have happen?**
2. **What procedures are you going to follow to make it happen?**
3. **What resources are you going to use to make it happen?**
4. **Did what you wished to have happen actually happen?**

Translated in educational language, accountability means:

1. **Establishing measureable performance objectives.**
2. **Developing activities as a means of achieving the performance objectives.**
3. **Identifying and allocating resources essential for carrying out the activities.**
4. **Conducting the desired activities.**
5. **Evaluating objective achievement during and at the end of program activities.**
6. **Reporting objective achievement to the community served by the institution.**

Zero-base budgeting does address itself to certain aspects of accounting, namely comprehensive planning and the development and application of strategies to achieve previously established goals and objectives. Zero-base budgeting, to date, has *not* placed strong emphasis upon the development of measureable performance objectives along with an effective monitoring and evaluating procedure. If zero-base budgeting is to be considered primarily as a support tool for better planning, then perhaps the monitoring and evaluating procedures can be provided for in the more comprehensive planning

models of individual school districts. However, if educators plan to use zero-base budgeting as a major approach to being more accountable, then it would seem reasonable to expect that they will need to find effective ways to incorporate the evaluation component into the overall process.

In summary, the nature and characteristics of zero-base budgeting indicates a potential for greater use in school districts.

The present model, designed for business and government, will need to be modified somewhat if education is to realize its fullest utility. At the present time, zero-base budgeting is not being used by a large number of educational institutions.

10

The development of decision packages and their ranking are required processes of zero-base budgeting. Educational planning, decision making, and resource identification and allocation are essential activities associated with the preparation and ranking of decision packages. Zero-base budgeting requires a strong commitment by planners to the process of analysis in decision package development.

The current zero-base budgeting model may be viewed as a management tool, rather than a management system. Pyhrr (31, p. 36) says that zero-base budgeting, as a tool, can efficiently identify and evaluate activities and their related problems so that management can make decisions, take action to solve problems, and effectively allocate and use the organization's resources.

Chapter 3

The Decision Package

Zero-base budgeting may be defined as having two basic operations: (1) the development of decision packages and (2) the ranking of decision packages. This section is concerned with the development of decision packages. Chapter IV, which follows, will present the ranking of decision packages.

The Decision Package Concept

A decision package is a document that presents a written description of a specific program or activity so that management can: (1) analyze and rank it in a relationship with other programs that utilize organization resources; (2) make a decision about acceptance, modification, or non-acceptance of the program and; (3) decide upon the funding level of accepted programs for inclusion in the budget. The information provided in a decision package should enable management to clearly identify and associate the relationship of the specific program to the organization's major goals and objectives. Thus, a decision package can generally be defined as a document that provides information about a separate or discrete function, program or activity of the organization which consumes resources and is subject to management planning and decisions.

Zero-base budgeting is a tool that assists administrators of programs or activities to analyze their operations and provides information to upper level administrators to allocate resources more effectively. In general the procedures to accomplish this analysis and decision making are:

1. **Identification of the organization's decision units.**
2. **Development of decision packages for the decision units.**
3. **Critical analysis of all decision packages.**
4. **Evaluation and ranking of the decision packages.**
5. **Allocation of the organization's resources.**

Determination of Decision Units

Zero-base budgeting makes it possible for administrators of programs to concentrate their attention on evaluating the program and to make decisions about the program's continuation. Programs that consume resources may be called decision units. These decision units must be identified so they can be isolated and individually subjected to analysis and decision making. A decision unit may be identified as any budget or cost unit in the organization. In some situations where the budget is large or encompasses separate and different functions, the administrator may wish to develop several decision units, which are then analyzed individually. A decision unit may also be identified as individual projects, specific job assignments, or capital
12 projects. Each individual organization will determine for itself the kind and type of decision unit it will want to analyze and make decisions about when using zero-base budgeting.

In education, decision units for central administration may be the Superintendent's office, the personnel department, the business office, the research department, elementary and secondary instruction, etc. Some of these decision units may be too large for meaningful decision making and analysis and thus could be separated into smaller units. For example, elementary instruction may be divided into several decision units, such as, curriculum services, school building attendance centers, special projects etc. Usually, upper level administration will identify the broad organization or program levels as major decision units. It then becomes the responsibility of the lower level administrators to determine additional decision units, if appropriate, within the identified broad categories. Once administration has identified the decision unit the next step in zero-base budgeting is to describe each decision unit in a document called a decision package.

Factors That Determine Decision Package Development

When implementing zero-base budgeting, administrators must make decisions about where to develop decision packages. The development of too many or too few decision packages will make their analysis unmanageable and reduce the benefits of zero-base budgeting. "Decision packages must be meaningful for both those preparing the package and those reviewing and evaluating them," said Pyhrr. (31, p. 45)

The size of the organization and its type of operation are key factors in determining where and how many decision packages to develop. Perhaps an appropriate way to begin would be to use the institution's organizational chart. The line and staff organizational chart of school districts usually provides an indication of a budget or cost center activity. If these organizational budget center activities are too large for meaningful analysis, the administrator could elect to divide the function into several separate decision packages or a single series of related decision packages.

Time and workload are other factors that should be considered when determining where to develop decision packages. The initial year of implementation will require more time and effort than the following years due to the newness of zero-base budgeting. The training programs, decision package development, ranking of decision packages and other implementation activities will consume more time during the first year of implementation. Careful planning of time and workload is very essential during the first years of implementing zero-base budgeting. If the installation of zero-base budgeting is allowed to become overly burdensome, personnel may get discouraged, fall behind schedule, and eventually might refuse to participate because of not being able to perform other assigned responsibilities.

Decision Package Identification

The specific identification of programs eligible for decision package development can pose a problem for the lower level administrators. This is usually the case even after upper level administration has provided initial identification of decision units.

Further in-depth analysis of the organization is required by persons involved in the installation of zero-base budgeting. Specific guidelines and directions are needed by the developers of the decision packages. Direct communication and special briefing or training sessions are essential for decision package developers. The major considerations are:

1. **All administrators will develop decision packages.**
2. **Decision package content will be consistent throughout the organization.**
3. **Time schedules will be met.**

In educational institutions, which are basically people and service oriented, decision package development might be centered on the following subjects:

1. **Administrative, instructional, and staff personnel program.**
2. **Instructional and support service programs.**
3. **Special projects.**
4. **Objects or line items of expenditure (if the educational organization is not on a program budget).**
5. **Capital outlay programs.**

Each organization will need to establish its own individual guidelines relating to the development of decision packages. Decision package development guidelines should be incorporated into the master plan or manual for implementing zero-base budgeting in the organization. Additional discussion regarding the zero-base budgeting implementation manual will follow in Chapter 5.

Decision Package Form

The primary purpose of the decision package form is to display information about the program which is needed for analysis and decision making by the administrator in charge of the program. Information is also needed by higher level administrators, who will review, rank, and allocate resources for program operation. The decision package document communicates the recommendations of lower level administrators to higher level administrators.

Decision packages may become too lengthy (too much information) or too short (not enough information) for adequate analysis. Also, there exists a potential for developing too many decision packages if
14 the administrators document all separate levels of effort. Too much information can defeat the benefits of zero-base budgeting. It is not possible to describe the precise amount of information a decision package should contain, since this is a local organizational decision. However, some basic criteria might be useful in identifying the information that should be included in the decision package. The information included in the decision package should:

1. **Assist administrators to adequately assess each program and to help them make a decision regarding whether or not to allocate resources and to set the level of funding.**
2. **Provide cost/effectiveness data (useful in funding decisions).**
3. **Display quantitative data needed for special analytic procedures.**
4. **Include special coding and classification data that will enable administrators to group resources and costs by budget categories.**
5. **Provide other information that will help the administrator who prepared the decision package to discuss it effectively in special sessions with other administrators from different levels of management.**

Decision Package Content

The informational content of a decision package should be determined by persons involved in the implementation of zero-base budgeting. The agreed-upon form and content should be included in the zero-base budgeting implementation manual. A pilot test of the decision package form in a limited area can lead to an improved format prior to its use throughout the entire organization. Also, format changes in the decision package can be made at appropriate times during subsequent years of use.

Descriptive Information

The decision package content should include information which presents a general description of the package. General information presented may include descriptions such as:

1. **The title or name.**
2. **Date of development.**
3. **Rank identification number.**

4. **Organizational level description.**
5. **Budget and/or accounting codes.**
6. **Name of person(s) who developed the package.**

The title or name identifies the function, program or activity that is the basic subject of the document. It may signify that the package represents a separate and distinct program or that it is one of a series of packages representing a large budget, or cost center. The date is useful for time placement of the packages development, especially in identifying the most current package.

The information on ranking shows the order of priority the package has in relation to other packages within a specific organizational level. The name of the person(s) who developed the package fixes the responsibility for managing the program. The organizational level provides for location of the package in the institution. The budget and accounting codes enable administration to place the package in its appropriate place in these documents. This general information may be placed at the top of the decision package as "header information."

Purpose

A second major content area is the description of the purpose of the program. The purpose should identify how the program relates to the mission of the organization. Goals and objectives should also be included in this purpose section. Additional purpose description might include an explanation of the service(s) to be provided, the specific need to be met, and/or the problem the activity is seeking to solve.

Program Methodology

A third area of content describes the program methodology. In this section the specific methods and activities required for the program's operation are set forth. Also, this description may include the various kinds and types of resources needed to conduct the program. Resources will include time, personnel, materials and supplies, equipment and facilities as well as any special arrangements related to them. The cost of the resources may be part of this section or detailed in a following area.

If cost information is not included in the program methodology content area, it should be provided in a separate content area. Cost information is essential to the ranking of each decision package with all other packages. In most, if not all, educational institutions there is a definite limit to available resources. Because of this resource limitation, each decision package competes with all other packages for the organization's limited resources. To be of maximum use in the analytic process program costs must be associated with expected program effectiveness. Cost/effectiveness analysis information is very useful to administrators when ranking decision packages.

Cost data provided in the content of decision packages must be uniform and standardized by some acceptable method(s). If no method is established, costs can vary in any number of ways. For example, costs may be expressed in daily, weekly, monthly or annual dollars. Also, costs might be expressed in full-time equivalents or man-days. Another way of expressing dollar costs in decision packages is by budget or expenditure classifications. Perhaps under certain conditions it might be desirable to separate costs into investment and operational classes.

An example of cost categories that might be used for inclusion in a decision package:

16

Salaries
Fringe Benefits
Travel
Materials and supplies
Equipment
Contractual services
Operation and maintenance
Transportation
Training
Media services
Communication
Publicity
Other

In addition to the above cost categories, it may be advantageous to display the historical cost for one or more previous years, provided a common base for comparison is maintained. Sometimes, it may be desirable to present future cost information of programs for as many as three to five years beyond the current or immediate next year. To further aid and support the analysis of decision packages, variations of cost levels from one year to the next may be presented in plus or minus amounts or as percentage increases or decreases. The problem of how to cost the decision package is not an easy one to resolve. Careful planning is required before a suitable method can be established. Once a method of costing decision package activities has been developed, it should be used consistently by all persons throughout the organization.

Expected Outcomes As Measures Of Effectiveness

The decision package's expected outcomes should be described in both quantitative and qualitative language. This is somewhat difficult since the package developer(s) must often rely on subjective judgements. However, it is almost always possible to provide certain types of quantitative outcomes.

In education, the number of children served, hours of instruction provided, number and type of meals served, number of paychecks processed, invoices prepared, credit hours provided, library books checked out, and buildings painted are but a few examples of quanti-

tative measures of program outcomes. The qualitative measures of achievements are more difficult to describe in a decision package. Most educators have become quite skillful in the development of performance objectives which establish both qualitative and quantitative measures of program achievements. The description of outcomes should list the tangible achievements that are expected as well as how the program will fully or partially assist in the attainment of the goals and objectives.

Decision Package Alternatives

A decision package alternative is created when the developer describes: 17

1. **A different level of effort.**
2. **Different ways of achieving the program's objectives.**
3. **Consequences if the decision package is not approved for funding.**

This content section requires program administrators to identify and describe different ways of operating the program. Each program alternative very likely will result in somewhat different resource requirements and variations in expected outcomes which provide additional information for use by upper level administrators in their analysis of alternatives. Decision package alternatives give upper level administrators the opportunity to select the most appropriate course(s) of action for the good of the entire organization.

In the description of consequences for not funding the program administrators can evaluate the impact that disapproval will have on the program's objectives and the organization as a whole. Thus, the cost savings of not approving the package for funding can be evaluated against the consequences caused by disapproval.

Chapter 3 has presented a discussion pertaining to decision packages, which are the basic documents that describe the operational programs of the organization. The information contained in decision packages allows administrators to analyze the contributions of the programs to the goals and objectives established by the organization. Also, decision package information enables administrators to rank the priority of the program in relationship to all other programs. Another use of the information displayed in the decision package is the determination of the relative quantity of resources to be allocated to each program. The information presented in the decision package may include:

1. **General descriptive data about the program.**
2. **The program's purpose, including goals and objectives.**
3. **Program methodology.**
4. **Cost information.**
5. **Expected outcomes (program achievement).**
6. **Consequence of not funding.**
7. **Alternatives.**

At the present time, there is no common or standard format for decision packages. Perhaps there never will be a standardized format, since each organization decides what is "best" for their operations.

On the following pages are examples of decision package forms used by two school districts. The Merrimack School District uses a worksheet to assist persons to develop decision packages. This form is illustrated in Figure 1. An example of a decision package for the Merrimack School District is provided in Figures 1 and 2.

The front and back side of the Memphis City Schools decision package is illustrated in Figures 3a and 3b.

18 The Merrimack School District forms were made available through the permission of James M. O'Neil, Assistant Superintendent. Ray Holt, Deputy Superintendent, Memphis Public Schools provided permission for use of the Memphis decision package form.

Figure 1.

MERRIMACK SCHOOL DISTRICT

DECISION PACKAGE WORKSHEET

Pkg. No.	Submitted by	Building & District
Brief Statement of Program (overview)		Initial Rank
Benefits of this Program	Alternatives	
Consequences of Non Approval of the Entire Program		
Resources Required (Last years cost and level of service provided)		
Resources Required (cost out additional funds needed and include possible extension of costs into next year's budget)		

Form F/VRSO/*

19

Figure 2.

MERRIMACK SCHOOL DISTRICT

Merrimack, New Hampshire

PACKAGE NO. 200 Series 210.1 Guidance Salaries
210.3 Clerical
290.7 Report Cards & Records

SUBMITTED BY: Guidance Director

PACKAGE NAME: Career Information and Support

RANK: 4 Should be funded to extend effectiveness of Guidance to optimum level.

20

GOALS: To provide service to 1200 students with four counselors. Each student receives from 2 to 4 hours individual counseling; ie. jobs, academic tracks, etc. Clerk maintains files, G.P.A. and records plus clerical tasks as required. (Note: The above focus still allows for approximately 3600 man hours for routine counseling.)

STATEMENT OF PROGRAM:

Present – Two counselors service 1200 students in an operation best described as crises oriented. Staff student ratio of 1 to 600 allows little or no time for in-depth consultation.

1978-79–Hire two additional counselors and one clerk and purchase an automated report card system.

BENEFITS: Comprehensive guidance services would be provided and success measured against current job placement of high school students and average G.P.A. of all students using 1977-78 as a base year.

CONSEQUENCES OF NON-APPROVAL:

Services during 1978-79 would be drastically cut because of additional focus of staff on requirements of P.L. 94-142. Handicapped students have complex placement and career planning needs.

ALTERNATIVE A

Hire one additional counselor with specific background in dealing with handicapped students. This is a minimal fall back level for 1978-79.

RESOURCES REQUIRED:			**Totals**
FY 1977-78	2 Counselors	$24,809	$24,809
FY 1978-79	4 Counselors	45,000	

Form i/5 VRSD *

Figure 3a.

Page Of

MEMPHIS CITY SCHOOLS
DECISION PACKAGE

REDUCED LEVEL 1
(Col 5)

Date

Function Name Function Code

RANK	
Director	
Asst Supt	
Systemwide	

Budget Cent Mgr Budget Cent Code

Services in this Package Address ☐State Law/Regulations ☐Federal Law/Regulations

1. Purpose And Expected Benefits Of This Package

2. Description Of Services Provided By This Package

3. Description Of Current Services Which Will Be Eliminated By This Package

4. Why Wasn't A Lower Level Of Service/Cost Proposed?

	76-77 ACTUAL	77-78 BUDGET	78-79 REQUEST THIS PACKAGE	78-79 REQUEST CUMULATIVE
Number of Positions				
EXPENDITURES				
100 Salaries				
200 Employee Benefits				
300 Purch Prof & Tech Serv				
400 Purch Property Services				
500 Other Pur Services				
600 Supplies & Materials				
700 Travel				
800 Property				
900 Other				
This Pkg **Total**				
% (78-79 / 77-78 Budget)				
CATEGORICAL REVENUE				
State				
Federal				
Other				

Figure 3b.

MEMPHIS DECISION PACKAGE (CONTINUED)

NUMBER OF POSITIONS

JOB CODE	DESCRIPTION OF POSITION	77 78 BUDGET	THIS PACKAGE
	Total (Must equal total positions on reverse side of form)		

DETAILED BUDGET BY OBJECT

OBJECT CODE	DESCRIPTION OF OBJECT	77 78 BUDGET	THIS PACKAGE
	Total (Must equal total expenditure on reverse side of form)		

COMMENTS OR ALTERNATIVES

Chapter 4

The Ranking of Decision Packages

Decision package ranking provides administrators with a procedure for planning all decision packages in a specific order or priority. Administrators engage in the ranking process by concentrating on several questions:

1. **What is the worth of this program in relationship to the organization's goals?**
2. **What is the value of this program in relationship to the other programs of the organization?**
3. **What resources should be allocated to what programs?**

Administration provides the answers to these questions when it arrives at a listing of decision packages in rank order of their decreasing value to the organization. The ranking process also enables administration to analyze the cost effectiveness of programs, the results of reduced levels of resource commitments, and the consequences of non-approval for decision packages ranked below the resource commitment level. In practice, the ranking process creates a priority for the decision package operation throughout the organization. Thus, to put it simply, the ranking process identifies and shows where administration is willing to expend the organization's available resources.

The Ranking Process

Personnel installing zero-base budgeting will need to establish the policies, rules, and procedures to be followed in ranking decision packages. Also, special ranking forms should be developed for use in the ranking process. In general, the creators of ranking policy and procedures will need to consider the following:

1. **Who in the organization will do the ranking?**
2. **At what organizational level(s) will the ranking(s) occur?**
3. **What will be the selected ranking criteria?**
4. **When and how often will the ranking process be conducted?**
5. **What type of ranking forms will be developed and used to record the ranking decisions?**

The ranking process policies and procedures, once developed, should be closely adhered to by all persons as they rank each decision package. If some persons follow the rules and others do not, ranking can become meaningless and will not serve the organization as originally intended.

Who In The Organization Should Rank Decision Packages

In an organization that fosters involvement and participation in planning and decision making (perhaps the only type of management environment that can effectively use zero-base budgeting), the first or initial ranking should be done by the person(s) who developed the decision package. This initial ranking provides the administrators an opportunity to evaluate the relative importance of their activities with others at the same program level. In addition, the initial ranking serves as a recommendation to upper level administrators and can provide a guideline as they consolidate or merge decision packages from other areas.

The ranking process is best accomplished when it is a "bottom to the top" procedure. The lower level division managers (persons who develop the decision packages) perform the first ranking within their organizational divisions. Following this first level ranking, middle managers and upper level managers will review and rank the decision packages.

At the higher levels and point of decision package consolidation, ranking can best be accomplished by a team or by a committee. At this higher level, more expertise and a broader perspective is required in order to rank packages. In education institutions, it may not be necessary to establish new committees. Certain established committees might be assigned ranking responsibilities. For example, the superintendent's cabinet and certainly the school board should be engaged in the ranking process.

Ranking Methods and Procedures

The procedure for engaging in the actual ranking process must be established by the organization. The ranking policies, rules, and procedures created by the organization should specify the mechanical procedures, time schedules, and method of reviewing and ranking the packages. Whether the ranking is done by individuals or committees, a procedure must be agreed upon which can be followed in ranking the packages. Several factors should be considered. They are:

1. Which packages to rank.
2. The number of packages to be ranked.
3. Establishment of voting methods and criteria.
4. The ability of the people involved in the ranking process.
5. Method of package presentation.
6. A time schedule for ranking the packages.
7. Review and final ranking procedures.

When a small number of packages are to be ranked by knowledgeable persons, a simple physical sorting by order of importance can be used. In this physical sorting method each package is reviewed, and through the professional expert judgement of the rankers, a priority listing is obtained. The physical sorting technique of ranking becomes difficult, if not impossible, when the number of packages to be ranked exceeds 20.

Should the number of packages to be ranked exceed a reasonable number (20), other techniques for ranking must be developed. The most commonly used technique is the voting method.

Any number of voting procedures may be developed by the members of an organization. They range from the very simple types to very complex methods. A combination of voting techniques might be used when the organization's packages vary widely in functions to be performed. A simple process might be used for some service or support activities which have only a few criteria to be considered. A more complex voting procedure is required when there are many factors to be considered in determining the rank of the packages. Complex voting procedures are useful when the package has a particularly high value. Some possible voting procedures are:

1. **The individual doing the ranking assigns a single numerical value to the entire package using a predetermined scale of values.**
2. **The individual may assign a single numerical value (from a predetermined scale of values) to each selected criteria to be voted on. The total of criteria values then becomes the rank of the package.**
3. **Members of a committee get one vote on a predetermined fixed scale. The total points or average can then be used to determine the package's rank.**
4. **Each member votes on all of the selected criteria. Each uses even or weighted values that are predetermined. The criteria values are then totaled or averaged, which then is the rank of the package.**

A single scale voting technique is probably the most simple and easiest to use when ranking a large number of packages that require only subjective judgement. A multiple-criteria scale for voting is useful for ranking packages that have complex criteria and which require detailed analysis.

One aspect of ranking that affects the voting judgement of the rankers, is the desirable expenditure level for the program. The cost information in the decision package(s) provides some indication of this expenditure level. Also, an estimate of the expenditure level can be obtained from the previous year's program cost. The program's desired expenditure decision point is arbitrarily fixed on the selected numerical scale. It is used as a decision point for selecting scale values that indicate the priority of funding for the package. Suppose a scale of one to ten has been agreed upon for ranking the package. The expenditure decision point concept is illustrated in the following:

Scale Value	Funding Level
10	Packages must be funded
9	
8	
7	
6	Packages borderline for funding
	Expenditure Decision Point
5	Packages have some value and would be
4	funded if the expenditure level was
3	increased
2	
1	Packages should not be funded

26

Although voting scales can have any number of values, it is not considered practical to have too wide a range of values. Scales with six to ten values are common in business, industry, and government. Also scales with an even number of values seem to work better since they tend to prevent the selection of a middle value for a large number of packages.

One possible problem which can result from using a scale that has a small range is that a large number of packages may end up with the same rank. This can frequently happen if the ranking is done by one person and there are a large number of packages. However, if a committee composed of six persons are ranking the packages and are using a scale with values of one to ten, the spread will be larger. The rank could range from 6 (all six persons vote one) to 60 (all six persons vote ten).

The potential of having several packages with the same value will not cause any major difficulty because a relative order of package priority has been accomplished. However, if too many packages are located at the cut-off point of funding, a need exists for a more precise ranking process. In this type of situation, usually only the packages around the cut-off point of funding are subjected to further review. The packages that are well above or below the cut-off point do not need to be included for additional analysis.

Usually packages are ranked individually, one at a time as they are reviewed and analyzed. The rank placed on the package is the result of the voting procedure adopted by the rankers. The initial ranking of packages by the developer(s) of the program may involve explanation and discussion with the other persons involved in the ranking process.

Higher level ranking committees, who have wider organizational responsibilities, will probably go through a summary review of the packages in order to obtain broad perspective of all decision packages. These upper level ranking committees will probably not rank all packages but may focus only on the lower priority packages that are near the cut-off funding level. These committees may reset the funding limits (both upper and lower) based upon the organization's available resources. Thus, the upper level ranking committee

may spend its time and effort in ranking decision packages that are in the 70 to 120 percent funding area of the present year's expenditure level if they expect a 80 to 100 percent funding level for all packages in the forthcoming year.

The presentation of decision packages to the upper level committees creates a logistical problem. The presentation method can only be resolved in terms of the time available, the number of persons on the committee, and the number of decision packages to be reviewed. Several presentation methods may be considered:

1. **Give each committee member a complete copy of all decision packages.**
2. **Use audio-visual techniques to display information related to the packages.**
3. **The presentation methods in one and two can be combined.**

Consolidation of packages by major organizational divisions can also assist committees to rank a larger number of decision packages. Special briefing sessions can be alloted to administrators of various divisions to provide a verbal explanation about each package in their division. In educational institutions school principals may be asked to present and discuss their school's packages to the upper level ranking committee.

During the ranking process it becomes important to keep personnel informed and up-to-date regarding the status of the decision packages as they progress through upper level reviews. The communication of information about the disposition of decision packages is valuable for keeping personnel interested in the process, obtaining support in the future operation of the decision package, and assisting staff to understand upper level ranking procedures.

Following the upper level ranking committee's review, the packages may be assigned to a new rank and presented in a consolidated ranking form. Eventually the consolidated ranking forms lists all decision packages of the organization and is presented to the final authorities for their decision making and ultimate allocation of resources. In educational institutions the final funding level is established by the board of education. The final decision-making and funding of decision packages leads to the organization's official budget for the future year's operation.

The Summary Ranking Form

The work of upper level ranking committees and the final decision-making authority is made easier by using a summary ranking form. A summary ranking form displays the packages by rank order of priority. The package with the highest rank is listed first, the other packages follow in descending order according to their rank. A summary ranking form contains only selected items of information needed for analysis. They are obtained from the decision package.

The items commonly appearing in a summary ranking form are:

1. **The package's rank.**
2. **The name/title of the package.**
3. **Amount of resources required (resources are expressed as dollar totals).**
4. **Cumulative cost level.**
5. **Other items deemed appropriate by the organization, such as the the previous year's and/or future years' funding level.**

Summary ranking forms should not contain too much information because excessive data can cause them to become cumbersome for the analysis procedure used by the ranking committee or final
28 authority. If more information is desired, it can be found in the decision package documents.

The final ranking form which lists all decision packages for the organization provides administration with a level of final funding. The cumulative cost column is the source of information for the level of final funding for decision packages. The level of final funding is established by the total amount of funds that are available to the organization for the next budget period. The total funds available to the organization is usually obtained through a revenue forecast conducted by its personnel. All decision packages whose rank places them below the level of final funding will not have resources allocated to them. Should more funds become available to the organization, then additional decision packages may be funded in order of their assigned priority rank.

In Figure 4 a summary ranking form is provided to illustrate the level of final funding concept. The information is fictitious, but it will help to explain the form and its use.

Decision packages are listed in order of priority for the forthcoming fiscal year. The current fiscal year is also listed for review purposes. The current fiscal year's total funds available are $16.5 million and the forecast of available funds for the next fiscal year are $17 million. Individual programs for the fiscal year 1978 are expected to use $16,460,000 dollars. A $40,000 dollar cash balance is estimated as a carryover into next fiscal year.

The information contained in a summary ranking form highlights areas for decision making. Some of the decision areas, using the data in Figure 4 are:

1. **Fiscal year 1979 available resources are insufficient to fund all of the fiscal year 1979 programs.**
2. **Some fiscal year 1979 programs have increased in costs and some have expanded their personnel needs.**
3. **Decision packages are ranked in order of priority, but number 18 might be moved up if the planners want to fund it with some of the cash balance expected at the end of the fiscal year.**
4. **Decision packages number 17 and 18 are below the final funding cut-off point.**

Figure 4.

SUMMARY RANKING FORM

Organization: Anywhere District
Prepared By: Executive Committee
Date 11/20/77

Rank FY 79	DECISION PACKAGE NAME	FY 78 Exp.	FY 78 People	FY 79 Exp.	FY 79 People	Cumulative Total—FY 79 ($000)
1	Elementary Instruction	8122	912	8203	921	8,203
2	Secondary Instruction	6143	680	6187	688	14,390
3	Special Education	276	12	318	14	14,708
4	Vocational Education	169	9	195	11	14,903
5	Administration	392	18	401	18	15,304
6	Transportation	78	2	70	2	15,384
7	Maintenance	407	14	410	14	15,794
8	Athletics	148	7	146	7	15,940
9	Band	81	4	90	4	16,030
15	Summer School	133	8	132	8	16,670
*16	Alternative School	280	17	310	18	16,980
17	Community School	57	2	60	2	17,040
18	Outdoor Recreation	26	1	41	2	17,081
19						
	TOTALS	16460	1710	17081	1742	17,081

FY 78 Total resources $16.5 million.
FY 79 Estimated Total Resources $17 million.
* Final Funding Level

29

Figure 5.

5. **The decision packages illustrated are consolidated for major divisions in the district.**

If the executive committe wishes to fund decision packages below the final cut-off point, they might examine the individual packages which were used to prepare the single consolidated division packages listed in the Summary Ranking form.

The ranking of decision packages has been discussed in this chapter. Organizations will need to develop policies, rules, procedures, and forms for the ranking process. Personnel engaged in the ranking process will need to acquire the knowledge and skill required for ranking decision packages.

30

The ranking process leads to an order of priority for each decision package developed by an organization. The rank order of priority depicts the decision package's value to the organization as well as its place in order for funding. Each decision package competes with all others for the allocation of the organization's available resources. The feelings and attitudes of the people who rank the decision packages may conflict with the information contained in the package during the ranking process. Yet, the ranking of decision packages is a required process and therefore it must be accomplished.

In this discussion of ranking decision packages, the academic and mechanical processes of ranking have been presented. The "political" aspects of ranking have not been discussed. However, in the real world of organizations there exists a "political" environment that surrounds and permeates all functions and processes when people interact within the institution. Educational organizations, because of their nature and functions, are highly dependent upon people interacting with each other to achieve established goals and objectives. When people rank decision packages they are in competition for a share of the institution's limited resources. The competition for a favorable rank (a rank that assures funding) among the people who develop and/or administer decision packages might become disruptive to the organization's achievement of goals. The specific rank assigned to a decision package could be the result of "political" considerations rather than from information in the package.

The "political" problem does not need to cause an organization undue difficulty; but it must be recognized and understood. The use of lower level and upper level committees for ranking tends to minimize the "politics" of ranking. Also, it should be noted that organizations have resolved resource allocation concerns prior to the use of zero-base budgeting.

In figure 5 a Weighted Ranking Form is provided through the courtesy of James M. O'Neil, Assistant Superintendent, Merrimack School District, Merrimack, New Hampshire. Ray Holt, Deputy Superintendent, Memphis City Schools, Memphis, Tennessee has provided an example of a Decision Package Ranking Form (see Figure 6).

Figure 5.

MERRIMACK SCHOOL DISTRICT

WEIGHTED RANKING FORM

(1) School Building and District	
(2) Prepared by	(3) Date:
(4) Decision Package Number:	Department, Curriculum or Other Budget Area

(5) Significance of this package to present need:

5 ( ) Most Important	2 ( ) Fairly Important
4 ( ) Very Important	1 ( ) Least Important
3 ( ) Important	Value:

(6) Adequacy of current funding on this package:

5 ( ) Least Adequate	2 ( ) Very Adequate
4 ( ) Fairly Adequate	1 ( ) Most Adequate
3 ( ) Adequate	Value:

(7) Likely future need of this package:

5 ( ) Greatest Need	2 ( ) Some Need
4 ( ) Great Need	1 ( ) Least Need
3 ( ) Needed	Value:

(8) Likely trend of service need covered by this package:

5 ( ) Greatest Change Likely	2 ( ) Some Change Likely
4 ( ) Great Change Likely	1 ( ) Not Likely to Change
3 ( ) Change Likely	Value:

Form A/VRSO *

31

MEMPHIS CITY SCHOOLS BUDGET REQUEST
DECISION PACKAGE RANKING

Department _____

RANK	DECISION PACKAGE NAME	FUNCTION CODE	LEVEL	FY 78 BUDGET BY FUNCTION		FY 79 BUDGET REQUEST					
						BY PACKAGE		CUMULATIVE			
				DOLLARS	POS	DOLLARS	POS	DOLLARS	% 79-78	POS	% 79-78

Approved By _____ Title _____ Date _____ Page _____ Of _____

Figure 6.

Chapter 5

The Implementation of Zero-Base Budgeting

Although progress is being made toward the installation of zero-base budgeting in business and government, most persons who are knowledgeable in the field agree that very little use of the tool is currently being made by educational organizations. The lack of knowledge and expertise relating to its use in the educational field will preclude early acceptance on a large scale. Thus, it appears that a general lack of understanding regarding the process of design, development, and implementation represents major deterrents for installing zero-base budgeting in educational institutions. The inadequacies of knowledge and design, when added to the lack of publications which document the application of zero-base budgeting, clearly indicates the need for more research and development.

This final section will present the design needs and administrative concerns that an educational organization will be confronted with when implementing and administering zero-base budgeting.

Three major important implementation areas will be discussed. These areas are:

1. **Development of implementation procedures and documents.**
2. **Administration and communication support requirements.**
3. **Personnel development procedures.**

There are four major requirements to which educational administrators must be committed when they become desirous of implementing zero-base budgeting.

These requirements are:

1. **Acceptance and strong leadership by the board of education.**
2. **Direct support and personal involvement by the superintendent, and the executive and operational levels of administration.**
3. **Development of adequate implementation procedures.**
4. **Effective administration and evaluation of the tool.**

Zero-base budgeting requires the development of a planning and budget philosophy, and a set of procedures that are adaptable to the

special needs of the organization.

Developing Implementation Procedures and Documents

First, it should be recognized that there is no one specific type of implementation design that will be "best" for all educational organizations. Each institution must develop its own particular procedures for implementing zero-base budgeting. However, it is possible to provide general implementation procedures that should be considered. Basic questions related to these implementation procedures are:

1. **Who will be responsible for managing the implementation?**
2. **Where in the organization should zero-base budgeting be implemented? Should the installation encompass the entire organization or should it be installed in one or only a few divisions of the institution?**
3. **Decision packages should be developed for what administrative level or levels?**
4. **What will be the structure and format of the decision packages and ranking forms? What information will each of these forms contain?**
5. **What procedures are to be developed and followed for reviewing and ranking the decision packages? At what level will the ranking process be accomplished? Who will rank the decision packages? What voting procedures are to be developed and used to rank the decision packages?**
6. **What policy guidelines, for developing and ranking decision packages, are needed by persons who must perform implementation activities?**
7. **By what methods will the implementation of zero-base budgeting be communicated and administered?**
8. **What training programs are needed?**
9. **What is the time schedule of activities required for the implementation?**
10. **How will evaluation of the zero-base budgeting implementation be achieved?**

The answers to the above questions must be provided prior to the start of implementation activities. The solutions to some of the above questions might require major changes in the organization's current methods of operation. Too many major changes should be avoided since they may disrupt the organization's achievements and restrict the implementation of zero-base budgeting.

The Team Approach

The planning and organization necessary for implementing zero-base budgeting can be accomplished in most educational institutions through the creation of a special implementation team. Team membership should consist of persons who can represent all levels of the organization where zero-base budgeting is to be installed. It is not necessary to establish a large centralized team for implementing zero-base budgeting in most organizations. The size of the team will vary depending on the wishes of top level administration. A small team can provide the essential assistance and guidance required since

most of the work should be accomplished by the organization's division administrators.

Team members must become thoroughly knowledgeable about zero base budgeting. This understanding can be acquired through a review of zero-base budgeting literature, visits to the institutions that are involved in its operation, and use of experts who are outside the organization. Also, the team members could attend any available zero-base training programs that are sponsored by other agencies.

The Implementation Manual

The implementation team, in conjunction with others, should have the responsibility for developing a comprehensive implementation manual. This implementation manual could consist of: 35

1. A general statement of the organization's philosophy, goals, and objectives regarding zero-base budgeting planning and operation.
2. Documentation of the organization's commitment to implementing zero-base budgeting.
3. A comprehensive implementation activity plan.
4. Identification of persons who are responsible for each activity.
5. A timetable for all activities.
6. A method for evaluating accomplishments.
7. Training methods and materials to be used for assisting all involved individuals to acquire the knowledge and skills essential to the implementation effort.
8. Policies and standards to be used for developing decision packages.
9. The voting procedures and criteria to be utilized for ranking decision packages.
10. Methods for preparing the organization's budget.
11. Examples of forms and instructions for their use.
12. A glossary of terms and their definitions.

The development and use of a well-designed implementation manual will do much to promote the success of zero-base budgeting implementation. The members of the implementation team may also become the initial training staff for other persons involved in the installation of zero-base budgeting.

Administration and Communication

The initial leadership for implementing zero-base budgeting must be provided by the superintendent, other central staff personnel, and the board of education. This top level administrative support is needed for the following reasons:

1. Creation of implementation policies.
2. Determining where in the school district to start the implementation.
3. Establishing the implementation team and its major responsibilities.
4. Identifying and allocating resources for the implementation program.
5. Monitoring progress and replanning where considered essential.

6. **Evaluating the results of implementation activities.**
7. **Establishing the level of involvement and communication with persons and agencies outside of the school system.**

Lower level administrators may wish to appoint an individual or team within their division to be responsible for coordinating implementation activities with the central implementation team. These lower level division persons or teams can assist the division to plan and organize its implementation activities by:

1. **Reviewing and communicating district wide policies and procedures.**
2. **Identifying where within the division decision packages will be developed.**
3. **Determination of the levels for ranking the decision packages.**
4. **Preparation of the division's time schedule for preparing and ranking decision packages.**

Also, these division persons or teams can help during the implementation process by:

1. **Distributing the zero-base budgeting manuals and special forms to all persons who will be developing and ranking decision packages.**
2. **Conducting training sessions with appropriate division personnel.**
3. **Working directly with division persons during the implementation and ranking of decision packages.**

During the installation of zero-base budgeting, upper level administration should be kept informed of progress and difficulties encountered by the implementation team. By keeping abreast of the implementation, top administration can resolve problems and make changes which will improve the installation and make it easier for all staff members.

Administration Policy Decisions

Administration may find it essential to make several policy decisions in order to establish a uniform application of zero-base budgeting throughout the organization. Some of the policy decisions that educational planners must make are indicated in the following questions:

1. **Will there be a need to make organizational changes?**
2. **What budget format changes are required?**
3. **Will the union contract be affected?**
4. **How should personnel reduction be handled?**
5. **What method will be used for costing the decision package?**
6. **How will inflation be accounted for?**
7. **How will salary and wage increases be handled?**

Policy decisions of the type suggested above should be resolved prior to the implementation activities, if at all possible. Information regarding policy is very useful to administrators who have the responsibility for developing and ranking decision packages.

Budget Format

Zero-base budgeting, when implemented in an educational system, may require certain changes in the organization and format of the budget document. Many school districts are following a budget format that lists (mandated by state school law) dollar cost by object of expenditure, e.g.: Administration, Instruction, Maintenance, etc. Two types of potential difficulties appear when a school system must prepare an object expenditure budget and is engaged in the implementation of zero-base budgeting.

First, the state mandated format must be followed in the official budget document. This is not the best style for zero-base budgeting. The second problem is that the sources of budget information, when installing zero-base budgeting, are the decision packages which are organized by the programs of the school system. Potential solutions to the problem are:

37

1. **The school system will prepare two budgets. The official budget will follow the state mandated format, and the other the zero-base budgeting format.**
2. **Initiate changes in the state mandate that will allow submission of budgets with a zero-base budgeting format (which is basically a program budget).**

Solution one will require the school system to organize and plan the cost areas of the decision packages in such a way that a direct relationship will exist between the resource cost of decision packages and the required objects of expenditure in the state mandated form. A number of state governments have already passed laws that require or allow school systems to prepare and submit budgets which follow a program format. In states that allow program budgets, zero-base budgeting must be designed to be compatible with the program dimensions provided by the state government.

Governance of Education

There are three levels of governance for public education. Each level has a varying degree of authority, responsibility, and power to act for the benefit of children in the public school system. The federal government has acted in behalf of children for the good of the nation. The state government, to a greater or lesser extent, has delegated responsibility for school operations to a local educational agency. However, the state government, through the state educational agency, has retained certain authority and responsibilities.

The state government and local educational agencies maintain communication with each other with the basic recognition that the local school district is the operator of the schools and the state provides resources and leadership for education. The implementation of zero-base budgeting may alter the existing relationship between the state and the local educational agency. Zero-base budgeting provides information about educational programs in a new way. School systems

using zero-base budgeting clearly indicate that they have incorporated the use of systematic planning including the analysis of alternatives, and hopefully, have placed an emphasis on the evaluative aspects of programs. The implementation of zero-base budgeting must occur within the context of the school systems' governing bodies and all of their policies and laws.

Communication

Communication is the primary means that the leadership of a school district can use to gain and marshal the support it needs to install zero-base budgeting. When upper level administration communicates its desire to implement zero-base budgeting, other persons at different levels of operation become more willing to participate in the essential activities. The board of education, through the superintendent, should seek to obtain support through an early disclosure and understanding of policy decisions regarding the implementation of zero-base budgeting.

Communication of zero-base budgeting philosophy and procedures is accomplished by:

1. **The development and distribution of an implementation manual.**
2. **Conducting staff meetings for the purpose of presenting and discussing the content of the manual.**
3. **Holding regular meetings at all levels of the organization during the actual implementation process to identify and discuss progress and problems.**
4. **Engaging in short briefing sessions for individuals who are preparing and ranking decision packages.**
5. **The development and distribution of the organization's budget document.**

A properly developed and operated communication program can assist persons to understand their role and responsibilities in the implementation of zero-base budgeting. Communication can also be the major method of learning about and resolving implementation difficulties.

Personnel Development

The implementation of zero-base budgeting will succeed to the extent that administration is able to develop the required knowledge and skills among the personnel of the organization. Zero-base budgeting is a new management tool which has potential use in educational institutions. The newness of zero-base budgeting makes personnel development a critical necessity for its effective implementation in educational organizations. Zero-base budgeting provides a tool to help personnel to consider each program of a responsibility center as it relates to all of the programs of the school district. The success or failure of an educational system is totally within the control of the people who are associated with the system. The staff development

program can become the most important asset a school system has available to ensure the successful implementation of zero-base budgeting. Because of its great importance, staff development must be carefully planned and conducted for all members of the organization. The staff development program should provide desirable and attainable opportunities for professional growth and advancement. The program should be designed to provide an appropriate balance between inservice training and career development opportunities.

Proper personnel development programs depend upon specific planned procedures. The plans should make provision for:

1. **Assessment of personnel training needs.**
2. **Evaluation of personnel strengths and weaknesses.**
3. **The design of special training programs which include:**
   (a) the content of instruction, (b) the methods of instruction, (c) a time schedule, (d) the instructors, (e) the materials and supplies, and (f) the evaluation of the programs.

School systems can utilize a variety of ways to operate personnel development programs. Some of these ways are:

1. **Released time for personnel during the school day.**
2. **Afternoon, evening, or weekend training with compensation for time spent in the program.**
3. **Summer development programs with compensation for personnel who participate.**

Research and experience has identified several critical factors that can determine the success or failure of a personnel development program. Some of these factors are:

1. **Good planning.**
2. **Properly selected training staff.**
3. **The timing of the program.**
4. **Provisions for more experiential activities.**
5. **Better evaluation.**

Zero-base budgeting implementation will require personnel development in the areas of: (1) management skills and techniques; (2) analytic procedures; (3) development of decision packages; (4) ranking of decision packages; (5) interpersonal relations.

Administration has the responsibility to identify personnel training needs, to design and conduct the training programs and to evaluate the results. Zero-base budgeting can be successfully implemented in an organization if the people who operate it are willing, informed, and have the knowledge and technical skills to perform their responsibilities.

Thus, zero-base budgeting can assist the personnel of an organization to plan and make decisions about the most efficient and effective ways to use their available resources. Only time and history will tell the story about the use and degree of effectiveness of zero-base budgeting in the educational institutions of this nation. ■

Bibliography

1.
Anderson, Donald N. "Zero-Base Budgeting: How To Get Rid of Corporate Crabgrass". *Management Review* (October 1976)

2.
Anderson, Donald N. "Use ZBOP* To Keep 'Crabgrass' Out Of Your Operating Budgets". Presented at A.G.A. — EEI Accounting Conference, Houston (April 26-28, 1976)

3.
Anderson, Donald N. "Zero-based Budgeting: Weeding Out Corporate Crabgrass" *Managers Forum* 3 (May 1976): 1, 3, 6.

4.
Anderson, Donald N. "Murphy's Law Vs Zero-Base Budgeting". *Management Review* (October 1977): 53, 54.

5.
Anthony, Robert N. "Carter's Famous Zero-Based Budgeting is a Fraud" *Los Angeles Times* (May 1, 1977)

6.
Brueningsen, Arthur F. "SCAT — A Process of Alternatives". *Management Accounting* (November, 1976): 55-60, 66

7.
Business Industry Week "Zero-Based Budgets offer data, spending control" 188: 48-50 (January 12, 1976)

8.
Cheek, Logan M. *Zero-Base Budgeting Comes of Age* New York: AMACOM, 1977

9.
Cheek, Logan M. "Cost Effectiveness Comes to the Personnel Function" *Havard Business Review* May-June 1973): 96-105

10.
Cheek, Logan M. "Zero-Based Budgeting — A Planning Tool" Presentation at American Management Association Orientation Seminar, San Francisco: January 31, 1977 — February 2, 1977

11.
Clark, Lindley H. Jr. "Zero-Base Budgeting, Advocated by Carter, Used By Many Firms" *Wall Street Journal* (Apprs. 3 10-77).

12.
Clark, Lindley H. Jr. "Speaking of Business". *Wall Street Journal* (August 31, 1977)

13.
Davis, Roscoe K. "Budgeting by Level of Activity". *Managerial Planning* (May/June, 1976): 10-13

14.
Georgia. Office of Planning and Budget. "General Budget Preparation Procedures, Fiscal Year 1978 Budget Development." Atlanta: 1976 31 p. HJ2053.1. G4A5

15.
Goldman, Henry H. "ZBB Without Paperwork" *Management Review* (October 1977): 51-53

16.
Harvey L. James *Zero-Base Budgeting in Colleges and Universities.* Denver: Ireland Educational Corporation, 1977

17.
Harvey L. James and Rusten, Allan C. *The ZBB Handbook For Local Governments.* Littleton Co.: Ireland Educational Corporation, 1977

18.
Hentschke, Guilbert C. "Is Zero-Base Budgeting Different From Planning — Programming — Budgeting Systems? *Planning and Changing* (Summer-Fall 1977, Vol. eight/number 2-3, 1977): 128-139

19.
Hill, Wally *Zero-Base Budgeting: The New World.* Monograph. Oxford, Ohio: The Planning Executives Institute, 1976

20.
Hogan, Roy L. "Zero-Base Budgeting; A Rationalistic Attempt to Improve the Texas Budget System". Austin. University of Texas, 1975. 182p. HJ2053.1.T4L6

21.
IFM Simplified Guide to Zero-Base Budgeting. The Institute for Management, IFM Building, Old Saybrook, Ct. 06475 $29.95

22.
Jackson, Frank and Hale, William S. "Zero-Base Budgeting." *Planning and Changing* (Fall, 1975/ Winter 1976/Volume six/number 3-4) Department of Educational Administration, Illinois State University, Normal, Illinois, 1976.

23.
Large, Arlen J. "Applying Zero-Base Budgeting". *Wall Street Journal* (May 24, 1977)

24.
McGinnis, James F, "Pluses and Minuses of Zero-Base Budgeting." *Administrative Management* (September, 1976)

25.
Merewitz, Leonard and Sosnick, Stephen, "The Budget's New Clothes: A Critique Of Planning-Programming-Budgeting and Benefit-Cost Analysis. Chicago: Markham Publishing Co., 1971 318 p. HJ2051.M4. "Zero-Base Budgeting" p. 59-71

26.
Minmier, George S. "An evaluation of the Zero-Base Budgeting System in Governmental Institutions". Atlanta 1975. 264p. (Georgia, State University, School of Business Administration. Research Monograph, No. 68) HJ2053.1. G4M5

27.
Murray, Thomas J. "The Tough Job Of Zero-Budgeting — Is Nevertheless Paying Off". *Dun's Review* (October 1974): 71-72, 128

28.
Nation's Business. "Zero-base Budgeting: one way to erase needless government programs". 64: 52-4+ November 1976

29.
National Governors' Conference. Innovations In State Government; Messages From The Governors. Washington, 1974. 375p. "Planning A Budget From Zero" by Jimmy Carter, p. 41-48. Reprinted in Congressional Record, Feb. 25, 1976. v. 122, p. H1314-15

30.
O'Neil, James M. and Manceri, Paul K. "Zero-Base Budgets — How They Can Work." *School Business Affairs* (March, 1977) Association of School Business Officials, Chicago, Ill.

31.
O'Neil, James M. and Manceri, Paul K. "Zero-Base Budgeting — A Decision Package." School Business Affairs (May, 1977) Association of School Business Officials, Chicago, Ill.

32.
Phelps, William W. "Zero-Base Budgeting: Practical Implementation." *Managerial Planning* (July/August 1977): 35-39

33.
Pyhrr, Peter, "Zero-Base Budgeting — Peter Phyrr Defends His Brainchild". *Masters in Business Administration* (April 1977)

34.
Pyhrr, Peter, "Zero-Base Budgeting: *A Practical Management Tool For Evaluating Expenses.* New York: John Wiley & Sons, 1973

35.
Pyhrr, Peter, "Zero-Base Budgeting" *Harvard Business Review* (November-December 1970): 111-121

36.
Pyhrr, Peter, "The Zero-Base Approach to Government Budgeting". *Public Administration Review* (January-February, 1977)" 1-8

37.
Pyhrr, Peter "Zero-Base Budgeting: Where To Use It and How To Begin". *S.A.M. Advanced Management Journal,* (Summer 1976)

38.
Robertson, J. "Government closeup as the sun sets slowly,". *Electronic News* 21: 14, September 20, 1976

39.
Schultze, Charles L. "The Politics and Economics of Public Spending" Washington, Brookings Institution 1968 — 143 p. (H. Rowan Gaither Lectures in Systems Science, 1968) HJ 2051.S371. "Incrementalism" p. 77-82

40.
Singleton, D. W. and others, "Zero-based budgeting in Wilmington, Delaware". *Government Finance* 5: 20-9, August 1976

41
Stonich, Paul J. (with staff of MAC Inc.) *Zero-Base Planning and Budgeting: Improved Cost Control and Resource Allocation* Chicago: Dow Jones Irwin, 1977

42.
Stonich, Paul J. "Zero-Base Planning — A Management Tool". *Managerial Planning* (July-August 1976): 1-4

43.
Stonich, Paul J. and Steeves, William H. "Zero-Base Planning and Budgeting" *Public Utilities Fortnightly* (September 9, 1976): 24-29

44.
"Sunset Laws,", *Wall Street Journal,* July 9, 1976, p. 12

45.
U.S. Senate, Subcommittee on Intergovernmental Relations, Committee on Governmental Affairs. "Compendium of Materials on Zero-Base Budgeting in the States," January 1977

46.
U.S. Congress. Senate. Committee on Government Operations. Government Economy and Spending Reform Act of 1976. Hearings on S.2925 and S.2067. Washington, U.S.G.P.O. 1976, 539 p. HJ2051.A1 1976. Report to accompany S-2925. Washington, U.S.G.P.O., 1976. 77 p. (Senate Rept. HJ2051.A1 1976)

47.
Wildavsky, Aaron. "Budgeting: A Compartive Theory Of The Budgetary Process". Boston: Little, Brown, 1975. 432 p. HJ20543.W5

48.
Wright. Norman H. Jr. "Zero-Base Planning and Budgeting — The Ranking Process". *Management World* (February, 1977). 31-33

49.
Wright, Norman H. Jr. "Zero-Base Planning and Budgeting". *Management World* (October, 1976)

50.
Zero-Base Digest. Published monthly by Tuffy Communications, Inc. 986 National Press Building, Washington, D.C. 20045. Vol. 1, No. 1 May 1977